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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TAYLOR, BARRY W

ART UNIT PAPER NUMBER

2643

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,454

Applicant(s)

KASPERKOVITZ, WOLFDIETRICH
GEORG

Examiner

Barry W. Taylor

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-52 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11 and 43-49 is/are rejected.
- 7) ☒ Claim(s) 12-42, 51 and 52 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/7/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstrom (4,660,042) found on Applicants 1449 in view of Ho et al (6,067,448 hereinafter Ho).

Regarding claim 11. Ekstrom teaches a communication device comprising a transmitter (20, 17, 22 figure 1) and a receiver (15 figure 1), coupled to an antenna (12, 13 figure 1) respectively via transmitter output and receiver input, as well as corrective signal means (40-72 figure 1) for reducing a transmitter leakage signal (11 figure 1) at the receiver input (col. 1 lines 12-14) and provided with a transmitter signal reference input (34 figure 1) being coupled to the transmitter output, a transmitter leakage signal input (76 figure 1) being coupled to a receiver input (see input of 15 figure 1) and a transmitter leakage signal output (see output of 62 figure 1) being coupled to transmitter leakage signal input (see 63 figure 1) thereby forming a negative feedback (see signal path from output 62 to input 64 in figure 1, col. 3 lines 55-57).

Ekstrom does not explicitly show amplifier used to selectively amplify the leakage signal.

Ho cites and improves on Ekstrom (see references cited in the Ho Patent) by using isolation circuitry (abstract, col. 1 lines 9-19). Ho discloses using amplifier to

attenuate components of transmitted signal that may be present at an output of mixer circuit to essentially isolate signal characteristics from the transmitted signal that would otherwise interfere with the signal outputted from the mixer circuit (col. 2 lines 4-62).

It would have been obvious to any one of ordinary skill in the art at the time of invention to utilize the teachings of Ho into the teachings of Ekstrom in order to isolate the receiver from transmitter in order to allow for detection of a signal of interest as taught by Ho.

2. Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstrom (4,660,042) found on Applicants 1449 in view of Ho et al (6,067,448 hereinafter Ho) further in view of Surauer et al (4,954,732 hereinafter Surauer).

Regarding claims 43-46. Ekstrom in view of Ho fail to show amplifier providing a non-linear amplification.

Surauer teaches a nonlinear frequency domain filter serving for the suppression of unwanted signals which are superposed on a wanted signal wherein the filter further comprises dead-zone controller (abstract, col. 1 lines 24-53) for adaptive adjustment options (col. 3 line 55 – col. 4 line 59).

It would have been obvious for any one of ordinary skill in the art at the time of invention to utilize the teachings of Surauer into the teachings of Ekstrom in view of Ho in order to suppress unwanted signals while automatically adapting to various operating conditions as taught by Surauer.

3. Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstrom (4,660,042) found on Applicants 1449 in view of Ho et al (6,067,448 hereinafter Ho) further in view of Thomsen et al (6,249,687 hereinafter Thomsen).

Regarding claims 47-49. Edstrom in view of Ho fail to show duplex filter.

Thomsen teaches a mobile phone (i.e. communication device having transmitter and receiver) that uses a duplex filter to replace the switch typically used when switching between transmit and receive paths (col. 1 lines 10-44, col. 7 lines 1-9) thereby saving on components and cost.

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Thomsen into the teachings of Edstrom and Ho in order to switch the desired frequency band into the transmitter or receiver path while reducing the number of components needed thereby saving on overall cost as taught by Thomsen).

Allowable Subject Matter

4. Claims 12-42 and 50-51 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor, telephone number (571) 272-7509, who is available Monday-Friday, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached at (571) 272-7499. The central facsimile phone number for this group is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Centralized Delivery Policy: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the central fax number **(571-273-8300)**.



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